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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,774	08/02/2004	Elisabeth C. Angelos	GEMS8081.222	4773

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EXAMINER	
VARGAS, DIXOMARA	
ART UNIT	**PAPER NUMBER**
2859	

NOTIFICATION DATE	DELIVERY MODE
10/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/710,774	ANGELOS, ELISABETH C.	
	Examiner	Art Unit	
	Dixomara Vargas	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10,12-15 and 17-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-10,12-15,17-19,21 and 22* is/are rejected.

7)☒ Claim(s) *20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-10, 12-15, 17-19 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hardy et al. (US 6,876,199 B2).

With respect to claim 1, Hardy discloses an MRI apparatus comprising (as seen on Figure 1): a magnetic resonance imaging (MRI) system having a plurality of gradient coils positioned about a bore of a magnet to impress a polarizing magnetic field (#145) and an RF transceiver system (#147 and #190) and an RF switch controlled (in transceiver means # 170 in order to switch from transmission to reception) by a pulse module to transmit RF signals to an RF coil assembly to acquire MR images (#120); and a computer programmed to acquire MR data (#110) from a field of view (FOV) that is smaller in a frequency encode direction than in a phase encode direction (Column 6, lines 34-44) and programmed to define the FOV such that the frequency encode direction extends parallel to an anterior/posterior axis extending through the bore (Column 4, lines 46-66).

3. With respect to claim 3, Hardy discloses the apparatus having a computer further programmed to cause application of a phase encoding gradient and a frequency encoding

gradient, and wherein the frequency encoding gradient is designed to cause a range of measured readout frequencies to come from a smaller spatial dimension than that defined by the phase encoding gradient (Column 6, lines 1-44).

4. With respect to claim 4, Hardy discloses the apparatus having a computer further programmed to dimensionally define the FOV from a left/right size of a two-breast volume (Column 6, lines 1-20, Figure 3).

5. With respect to claim 5, Hardy discloses the apparatus having a computer further programmed to reconstruct a bilateral image of a breast region of a subject along a generally axial plane (Column 6, lines 1-44, Figure 3).

6. With respect to claim 6, Hardy discloses the apparatus having a computer programmed to define readout in a direction to reduce artifacts resulting from cardiac motion during an axial bilateral breast scan (Column 4, lines 62-64).

7. With respect to claim 7, Hardy discloses the apparatus having a computer further programmed to define readout in a direction to reduce artifacts from CSF pulsation during a sagittal spine scan (Column 4, lines 62-64).

8. With respect to claim 8, Hardy discloses the RF coil assembly includes at least phased array coil architecture or a surface coil (Figure 1, coils #190).

9. With respect to claim 9, Hardy discloses the MR method of MR imaging comprising the steps of (Abstract): defining an FOV to have a phase encoding dimension and frequency encoding dimension, wherein the frequency encoding dimension is less than the phase encoding dimension (Column 6, lines 34-44), and wherein the frequency encode dimension is parallel to

an anterior/posterior axis extending through a subject to be scanned (Column 4, lines 46-66); and acquiring MR data from the FOV for image reconstruction (Column 4, lines 14-25).

10. With respect to claim 10, Hardy discloses the step wherein frequency encoding dimension is transverse to the phase encode dimension (Column 4, lines 46-66).

11. With respect to claim 12, Hardy discloses the step of acquiring MR data includes the acquisition of bilateral breast data from a patient along an axial plane of orientation (Column 6, lines 1-44; Figure 3).

12. With respect to claim 13, Hardy discloses the step of acquiring MR data includes the acquisition of spine data from a patient along a sagittal plane of orientation (Column 4, lines 62-64).

13. With respect to claim 14, Hardy discloses the step of acquiring MR data includes acquiring MR data with a phase array coil spatially sensitive to the FOV (Figure 1, coils #190).

14. With respect to claim 15, Hardy discloses a computer readable storage medium having a computer program stored thereon and representing a set of instructions that when executed by a computer causes the computer to (Figure 1, #110): apply a slice select gradient to spatially define an FOV in a first direction; apply a phase encoding gradient to phase encode the FOV in a second direction; apply a frequency encoding gradient to frequency encode the FOV in a third direction (Columns 3-4, lines 62-67 and 1-4 respectively; Figure 1,#145 for Gx, Gy and Gz), the frequency encoding gradient designed to spatially define the FOV smaller in the third direction than in the second direction (Column 6, lines 34-44); and acquire MR data from the FOV (Column 4, lines 14-25) with readout in the third direction (Abstract) which is parallel to an anterior/posterior axis through a subject (Column 4, lines 46-66).

15. With respect to claim 17, Hardy discloses the step wherein the set of instructions further causes the computer to define the FOV such that a frequency encoding axis is less in length than a phase encoding axis (Column 6, lines 34-44).

16. With respect to claim 18, Hardy discloses the step wherein the set of instructions further causes the computer to acquire bilateral breast MR data with gradient recalled echo readout (Column 6, lines 1-44; Figure 3).

17. With respect to claim 19, Hardy discloses the step wherein the set of instructions further causes the computer to acquire spinal MR data with spin echo readout (Abstract).

18. With respect to claim 21, Hardy discloses a breast imaging examination technique comprising (Column 3, lines 14-25; Figure 3): selecting an axial FOV sized to spatially include both breasts of a subject to be truncating the FOV in a frequency encoding direction along an anterior/posterior axis extending through a subject to be scanned (Columns 4-5, lines 46-67 and 1-11 respectively; Figure 3) such that the FOV is larger in a phase encoding direction than the frequency encoding direction; and acquiring MR data from the truncated FOV (Column 6, lines 1-25; Figure 3).

19. With respect to claim 22, Hardy discloses a spinal imaging examination technique comprising (Column 3, lines 14-25; Figure 3): selecting an sagittal FOV sized to spatially include multiple spinal regions of a subject to be scanned; truncating the FOV in a frequency encoding direction along an anterior/posterior axis extending through a subject to be scanned such that the FOV is larger in a phase encoding direction than the frequency encoding direction; and acquiring MR data from the truncated FOV (Column 6, lines 1-25; Figure 3).

Allowable Subject Matter

20. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. The following is a statement of reasons for the indication of allowable subject matter:

a. With respect to claim 20, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a computer readable storage medium having a computer program stored thereon and representing a set of instructions that when executed by a computer causes the computer to perform the step wherein the second direction is defined as extending along a width of a subject and the third direction is defined as extending along a thickness of the subject in combination with the remaining limitations of claim 15 above.

Response to Arguments

22. Applicant's arguments filed 03/13/07 have been fully considered but they are not persuasive.

23. Applicant argues that Hardy fails to teach or fairly suggest the step wherein the phase encode direction extends parallel to an anterior/posterior axis extending through the bore not parallel to the usual Z direction.

24. The examiner disagrees with applicant's argument because Hardy discloses the frequency encoding direction is the superior/inferior direction as shown in Figure 3 as SI (Column 6, lines 1-3). Furthermore, in response to applicant's argument that the references fail to show certain

features of applicant's invention, it is noted that the features upon which applicant relies (i.e., no parallel to the Z direction or perpendicular to the Z direction) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant is reminded that the claim language only requires phase encode direction and the anterior/ posterior axis to be parallel regardless of the X,Y or Z axis.

Conclusion

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

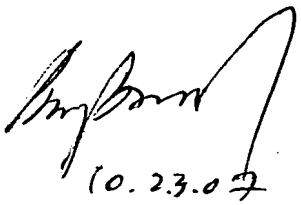
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on (571) 272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dixomara Vargas
Patent Examiner
Art Unit 2859



10.23.07

BRIJ SHRIVASTAV
PRIMARY EXAMINER